why SHOULD WARRANT PERSIST IN DEMON WORLDS?

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**1 Introduction**

Suppose you perceive as of a red ball on a table and thereby believe that there is a red ball on the table. According to mainstream moderate foundationalist theories of epistemic warrant, your perception as of a red sphere on a flat surface contributes to a prima facie warrant for your perceptual belief.[[1]](#endnote-1) Though nearly everyone in epistemology agrees perceptual states contribute to the warrant for perceptual beliefs, epistemologists disagree over why this should be so.

One major disagreement surrounds so-called “demon-world” cases.[[2]](#endnote-2) Imagine an ordinary perceiver reliably forming true perceptual beliefs on the basis of a normally functioning perceptual system and perceptual belief forming process. As described so far, it is more than reasonable to assume that this perceiver is forming warranted, and mostly true, perceptual beliefs. Now imagine a psychological duplicate of this individual undergoing the very same type of perceptual states and forming the same type of perceptual beliefs, but also imagine that this duplicate is not forming mostly true perceptual beliefs but entirely false perceptual beliefs. Maybe the individual has been unknowingly kidnapped and is now the subject of a virtual reality experiment at Cal Tech, or perhaps the individual is a massively deceived disembodied brain in a vat on Alpha Centauri, or perhaps an evil demon is systematically causing undetectably misleading perceptual states. We now have two cases: the normal case where a perceiver forms mostly true perceptual beliefs, and “demon-world” cases where the psychological duplicate (the individual who, from the inside, as it were, has exactly the same states, phenomenology, beliefs and so on) forms massively false perceptual beliefs. If the ordinary perceiver has warranted perceptual beliefs, does the psychological (but massively fooled) duplicate also have warranted perceptual beliefs?

One position in epistemology—internalist essentialism—says yes. Perceptual states necessarily possess the epistemic power to defeasibly warrant perceptual beliefs in all possible worlds, no matter the chances of truth. Perceptual states not only (contribute to a prima facie) warrant (for) perceptual beliefs in worlds where those states lead the individual to form mostly true perceptual beliefs, but perceptual states also (contribute to) warrant (for) perceptual beliefs in worlds or circumstances where those states, unbeknownst to the individual subject, lead the individual to entirely false perceptual beliefs. There is something “intrinsic” or “essential” about perceptual states so that they contribute to prima facie warrant for beliefs appropriately based on those experiences, nevermind the reliability of those experiences, or the reliability of the beliefs they appropriately cause and sustain. Forming true perceptual beliefs, on this view, has nothing to do with the warranting force of perceptual states. True, warranted perceptual beliefs in normal circumstances are mostly true, but that is neither here nor there given the nature of warrant. On this view, warrant, qua epistemic property, is not by its nature a reliable route to truth. Warrant, qua epistemic property, does not by its nature contribute to truth.[[3]](#endnote-3)

An opposing position in epistemology—reliabilism—says no. Simple process reliabilism asserts that in all possible worlds or circumstances a belief-forming process contributes defeasible warrant on a belief appropriately based on the process if and only if the belief-forming process reliably induces true beliefs in that very possible world or circumstances of use. Warrant by its nature is a reliable route to truth. Applied to perception, in all possible worlds or circumstances a perceptual state or perceptual competence defeasibly warrants a perceptual belief appropriately derived from the state or competence if and only if the state or competence is reliably veridical and so reliably induces true perceptual beliefs in that very possible world or circumstances of use.

On this view, our ordinary perceiver has warranted perceptual beliefs, for we’ve assumed he’s relying on reliable perceptual states when forming perceptual beliefs, but our duplicate does not have warranted perceptual beliefs, for the duplicate’s perceptual states are completely in error. Whether perceptual states defeasibly warrant perceptual beliefs seems to be, on this view, an entirely “extrinsic” or contingent, non-essential, feature of perceptual states and perceptual competencies. Some do, some don’t. It depends on the perceiver’s environment, among other things.

“Internalists” of the moderate foundationalist variety think perceptual states contribute to warrant by their nature, never mind truth. That’s why warrant may easily persist in “demon-worlds.” “Externalists” think warrant contributes to truth by its nature, never mind the essential nature of the warranting state. That’s why warrant might just lapse in “demon-worlds.”

This dispute between so-called “internalists” and “reliabilists” began in the late 1970s and the early 1980s. It is still very much alive as I write. Who currently has the upper hand? It is hard to say. On the one hand, the “intuition” that the massively deceived psychological duplicate has warranted perceptual beliefs is very strong and widespread. On the other hand, the general claim that warrant and truth are somehow constitutively related—the general claim that warrant is, in some sense, a reliable route to truth—is equally very strong and widespread. How could warrant, after all, be *epistemic* warrant, if it didn’t somehow reliably conduce truth and knowledge? Since it doesn’t initially seem as if both sides can be correct, the disagreement continues.

The work on this issue that interests me the most looks for middle ground. One strategy starts from the internalist side and tries to accommodate the opposing intuition: insist that warrant does not require reliability and then explain the connection with truth in other terms. The other strategy starts from the reliabilist side: insist that warrant requires reliability and then explain why warrant would persist in demon worlds even so. My preference is to start from the reliabilist side, for reliability theories of warrant purportedly lay bare the connection between warrant and truth, where “internalist” theories seem to leave it a mystery, at least to me.

Even though I think starting from the reliabilist side is the right way to go, this is not an easy task. The best-known work along these lines comes from Alvin Goldman and Ernest Sosa.[[4]](#endnote-4) Though the details differ, their main move goes like this: as a long as a belief-forming process (like perception) is reliable in a *special* set of worlds or circumstances (which then need to be specified to fill out the details of the theory), then the process defeasibly warrants beliefs based on that process in *all* possible worlds or circumstances. Then our ordinary perceiver has warranted perceptual beliefs (for our ordinary perceiver is in special circumstances, reliably forming true perceptual beliefs), and our massively deceived duplicate in “demon” circumstances also has warranted perceptual beliefs (for the duplicate is using a process that is reliable in *special* circumstances, even if not reliable in the duplicate’s *current* circumstances). According to “special circumstances” reliabilism, one can thereby “capture” the intuition that demon victims have warranted perceptual beliefs; in other words, one can concoct an extensionally adequate theory “immune” to demon world type counterexamples.

Though highly sympathetic, I am not persuaded by Goldman and Sosa’s efforts. They both face a general problem that applies to any instance of so-called “special circumstances” reliabilism: if warrant, qua epistemic property, is constitutively a good route to truth and knowledge, then how could warrant persist outside of “special” circumstances where the belief-forming process isn’t a route to truth and knowledge? Just because the process is reliable *here*, in *these* “special” circumstances, *why should* it confer warrant *there*, in *those* circumstances? If it contributes to truth *here*, but not *there*, how could it warrant *there*? If it does warrant there, *why* does it warrant there? What *explains* why warrant persists outside of special circumstances; what explains why warrant should persist in demon worlds? In my opinion, Goldman and Sosa have done little to answer this explanatory question, let alone directly address it. An extensionally adequate theory is not the same as an explanatorily adequate theory. [[5]](#endnote-5)

In “Perceptual Entitlement” (*Philosophy and Phenomenological Research*, 2003) Tyler Burge, on the other hand, directly addresses this question:

One can ask *why* *should* reliable success in…[the] normal environment bear on the contribution of perceptual states to entitlement in abnormal environments that the individual may have landed in…[for] *it is the individual at a given time for which warrant is supposed to provide a route to truth*...In many such environments, a perceptual state or competence…would not be a good guide to veridicality or truth…*Why* *does* [the contribution of the normal environment] *carry over* to other environments that the individual might form perceptual beliefs within? (Burge 2003: 533, emphasis added).

Burge’s answer to this question, to my knowledge, has received little attention in the epistemological literature, despite its potential to answer a question that has gone largely unadressed among those working in the reliabilist camp. Given the potential payoff, and the overall philosophical sophistication of his account of perceptual warrant in particular and epistemic warrant in general, critical examination of Burge’s account should prove well worth the effort.[[6]](#endnote-6)

That’s exactly what I plan to do in this chapter. I first expound Burge’s account of perceptual warrant before turning to his direct answer to our question. Burge gives his direct answer in a “transcendental argument” that is easy to find difficult to understand. After reconstructing his argument as an explanation for why warrant persists in demon worlds, I argue (unfortunately for our purposes) that it falls short, that it doesn’t provide a satisfactory explanation. A change of focus, however, combined with a distinction between two grades of warrant, on the other hand, does the trick. Consistent with Burge’s overall account of perceptual warrant, we can explain, I shall argue, why warrant should persist in demon worlds.

**2 Burge’s Normal Circumstances Reliabilism**

I now turn to Burge’s view.

Burge is no simple reliabilist; the sheer reliability of a belief-forming process is not on its own sufficient for warrant. Even so, he’s clearly as much of a reliabilist as Goldman and Sosa, for Burge also advances a version of special circumstances reliabilism, just as they do; reliability in special circumstances is (largely) necessary and sufficient, absent counter-considerations, for warrant. On Burge’s version of special circumstances reliabilism, special circumstances are *normal* circumstances: a perceptual state or competence defeasibly warrants a perceptual belief approrpriately derived from the perceptual state in *all* possible circumstances when functioning normally if and only if the perceptual state or competence is reliably veridical in *normal* circumstances when functioning normally (Burge 2013: 223, 260). An individual massively fooled in a demon scenario may thus enjoy warranted perceptual beliefs, provided the individual’s normally functioning perceptual competence is reliable in normal conditions:

Where a perceptual state is reliable in the normal environment, and certain other conditions on entitlement are met, the individual is entitled in *any* environment to perceptual beliefs that are appropriately derived from the perceptual state. (Burge 2003: 532, 539) Thus one does not become unwarranted by landing in an abnormal environment, or by being systematically tricked by a demon or a scientist. (Burge 2003: 507) [R]eliability…in relation to the environment the entitled individual happens to be in…is not necessary for entitlement. (2003: 509, n. 6) [[7]](#endnote-7)

Burge must then face the same question any special circumstances reliabilist must face: why should the fact that a perceptual state is reliably veridical in *special* (and so *normal*) conditions entail that it defeasibly warrants perceptual belief in *any* circumstances? As I just said, what’s so appealing about Burge’s account is that he squarely faces this question and provides an answer worth interrogating. He does not settle for extensional adequacy; he sets out to explain the persistence of warrant in demon-worlds. And so the issue before us is not extensional but explanatory adequacy. Does Burge explain why warrant should persist in demon worlds?

Before turning to Burge’s answer, we’ll first have to run through the way he motivates his normal circumstances theory of perceptual warrant. If you don’t understand his motivation, you won’t understand his answer.

*2.1 Two conditions on perceptual warrant*

To motivate his view, Burge places two conditions on perceptual states to defeasibly warrant perceptual beliefs.

*Condition one: reliability*

Perceptual warrant depends on the reliable veridicality of the perceptual state, for a condition on warrant is that it be a good route to truth. The “fundamental function of epistemic entitlement [is] serving as a good route to truth” (Burge 2003: 533). To contribute to perceptual warrant, a perceptual state type must be reliably veridical. (Burge 2003: 506, 531-536) “Reliability is necessary for epistemic entitlement because all epistemic warrant is fundamentally an epistemic good inasmuch as warrant is a good route to truth and knowledge” (Burge 2003: 532).

*Condition two: the nature of the state*

Perceptual warrant also depends on the *nature* of the perceptual state, for a condition on perceptual warrant is that the perceptual *state* contributes to truth and knowledge *through its* *nature*. Here Burge has in mind the fundamental foundationalist and traditional idea that perceptual states defeasibly and empirically contribute to warrant for perceptual beliefs, and do so on their own, independently of supplementary support from the individual’s background beliefs; perceptual states are elements in an individual’s perspective or point of view that provide empirical starting points for warranted belief about one’s external surrounds. But they do not simply do so; they do so non-accidentally, *through* or *by their natures*. Perceptual states, *by their nature*, empirically warrant perceptual beliefs. And so there must be something *about the nature of the state* that *explains why* it contributes to empirical warrant:

[A] perceptual state makes a contribution to entitlement that is not derived from positive contributions of other states…[Perceptual states can do that because perceptual] epistemic entitlements are goods that partly depend, in a principled or explanatory way, on the nature of the individual’s representational competence or perspective—hence on the nature of the individual’s perceptual states. (Burge 2003: 534)

This second condition separates Burge’s view from simple reliabilist theories of perceptual warrant, as we’ll see in a moment.

Burge then puts two and two together: to contribute to perceptual warrant, a perceptual state must have a *nature* (second condition) that is *reliably veridical* (first condition); this makes the state, *through its nature*, a good route to truth and knowledge:

Any contribution that a perceptual state makes to perceptual entitlement must depend on its having a nature that is reliably veridical…a perceptual state makes a contribution to entitlement that is not derived from positive contributions of other states. An empirical contribution derives from the state’s having a nature, as marked by its representational content, that is reliably veridical. (Burge 2003: 534) [W]arrant requires of warranted perceptual states and competencies that their being part of a good route to truth be explained in terms of their natures. (Burge 2003: 536)

So to contribute to warrant, a perceptual state must be reliable (first condition), and the explanation for its reliability must be associated with the nature of the state (second condition). A perceptual state, to contribute to warrant, must be reliable *through its nature*. That’s Burge’s core idea: perceptual states contribute to perceptual warrant (on their own, without positive contributions from other states) for *they have a nature that is reliably veridical*.

The first condition puts Burge squarely in the “reliabilist” camp. The second condition falls within the broad traditional foundationalist view that sees something epistemically special or relevant about the contributions perceptual competencies and perceptual states make to perceptual warrant for perceptual beliefs, independently of backing from other warranted beliefs.

*2.2 Having a nature that is reliably veridical*

What is it for a perceptual state or competence to be reliable *through its nature*? That’s the core idea, as I just said. What does it mean? Is Burge somehow embracing the internalist idea that perceptual states contribute to perceptual warrant necessarily or essentially? Is Burge then somehow embracing the idea that perceptual states are necessarily reliable, that they necessarily or essentially contribute to warrant through being necessarily or essentially reliable?

Burge rejects both ideas. He resolutely rejects the idea that any perceptual state is, or must be, reliable in *all* possible circumstances. He grants, consistent with his anti-individualism about perceptual states, the possibility of massive error, and so the possibility of demon world cases. Perceptual states do not essentially warrant beliefs appropriately derived from them for perceptual states are not essentially reliable.

Instead of insisting that perceptual states are necessarily reliably veridical in all possible circumstances, could Burge be arguing that perceptual states are necessarily reliably veridical *in normal circumstances*, and that’s how perceptual states meet the second condition on warrant, combined with the first?

Though Burge once asserted that perception was necessarily reliable in normal conditions, for some time he has resolutely rejected that idea too.[[8]](#endnote-8) Perceptual states need not be reliable, even in normal conditions. So for those that are reliably veridical in normal conditions, they are not essentially or necessarily reliable in normal conditions.

What then does Burge mean when he says that a perceptual state must be reliable through its nature to contribute to warrant if not necessarily reliable in normal conditions? What is it for a perceptual state to have a nature that is reliably veridical? What is it for a perceptual state or competence to be reliable *through its nature*?

Burge’s answer derives from his anti-individualist (semantic externalist) account of perceptual states (perceptual representations). It will take a few paragraphs to explain how he uses his anti-individualism to answer our question.

Perceptual states are individuated by their contents, so *to explain the nature* of a perceptual state type, one explains how the state acquired its capacity to represent the properties—attributes—of external objects.

According to Burge’s perceptual anti-individualism, perceptual state types acquire their contents partly through entering into *patterns* of causal interactions with physical particulars and their attributes distributed across the wider environment. A state acquires its content partly through “wide” patterns of causal interaction—environment-to-perceptual state and perceptual state-to-environment patterns—and partly through “narrow” causal interactions—patterns of interaction involving the perceptual state and other states within the organism. To uncover the explanation for why a perceptual state type has the content it has, look to evolutionary and learning history of the perceptual system as it serves the organism in a broader environment.

These patterns thus help form (and so constitute) the *natures* of perceptual states. These patterns are *formative* patterns, patterns that constitute the natures of the states. They are *explanatorily* (and so non-accidentally) *associated* with the *natures* (the contents) of representational states.

Burge then defines *normal environments* (circumstances, conditions) as environments where the perceptual system was formed (Burge 2003: 531, 533; cf. Millikan 1984). *Normal* environments are *formative* environments. Normal environments are then *explanatorily* and *non-accidentally* associated with the *natures* of representational states.

*Normal functioning* (normal working, operating or well-functioning) is then working or operating the way the perceptual system worked or operated when the state acquired its representational content. Normal functioning is functioning via the “narrow” formative pathways are associated with the formation of the perceptual state type.

We can now say what it is for a perceptual state to be reliable *through its nature*. It is to be reliable in normal conditions when normally formed. Non-accidental, explanatory reliability is reliability *through* normal functioning in normal conditions.[[9]](#endnote-9) A perceptual state type that is reliable in normal conditions through normal functioning is a state whose reliability is explanatorily associated with the nature of the state, reliability explained through conditions that formed the nature (the content) of the state.

What about our perceptual competencies and perceptual states? Are they reliable through their natures, in this sense? Yes. We know empirically that human perception on the whole is reliably veridical in our normal environment when functioning normally. Our perceptual states reliably represent particulars and their attributes in our normal environment when normally formed; our perceptual states (for the most part) are reliable *through their natures*, though pathways explanatorily associated with the formation of their representational contents.

Burge asserts being reliable in normal conditions is the *only* way to be reliable *through one’s nature*. Being reliable in normal circumstances is the *only* way to meet the second condition on perceptual warrant while also meeting the first:

The…reliability that is relevant to the contribution of perceptual states to perceptual warrant is one that attaches to the states’ normal functioning in the conditions that explain their natures. That is the only reliability that is non-accidental relative to the natures of the perceptual states… The account of perceptual entitlement *must* take as privileged the normal environmental conditions that help individuate perceptual states and competencies. For they alone connect reliable representational success to the natures of the states in a principled way. (Burge 2003: 536).

In other words, the only way to explain the reliability for perceptual states that is explained through the natures of perceptual state types is reliability through patterns of formative interaction—viz., reliability in normal conditions when functioning normally.

We can now summarize in argument form Burge’s motivation for his account from the two initial conditions on perceptual warrant:

1. Condition one: warrant is a reliable route to truth and to knowledge.
2. Condition two: perceptual warrant depends on the nature of the perceptual state.
3. Hence perceptual warrant depends on the perceptual state having a nature that is reliably veridical.
4. To have a nature that is reliably veridical is to be reliably veridical when occasioned through normal wide and narrow formative pathways.
5. To be reliably veridical when occasioned through normal wide and narrow formative pathways is to be reliably veridical in normal conditions when normally formed.
6. Hence a perceptual state contributes to warrant when and only when reliably veridical in normal conditions when normally formed.

We thereby reach Burge’s view that a perceptual state defeasibly warrants a perceptual belief appropriately derived from the perceptual state when and only when the perceptual state is reliable in normal conditions when normally formed.

*2.3 A clear consequence: accidental reliability does not confer warrant*

Burge now has an easy answer to a commonly asked question from the simple reliabilist: why isn’t in situ, de facto reliability enough for prima facie warrant? After all, if a perceptual capacity—even a broadly perceptual capacity like clairvoyance that results from a bolt of lightning—leads to mostly true beliefs, then it is a route to truth for the individual. Why isn’t that enough for warrant? Easy answer: the reliability in question is not associated with the nature of the warranting state or capacity; hence the reliability is “accidental” or “non-explanatory” relative to the nature of the reliable state or capacity. Only the first condition is met, not the second.

There must be something about the *nature* of the individual’s *capacities* or *point of view* that helps explain the individual’s psychological states’ being a good route to truth. Brute, “accidental” reliability does not suffice for warrant. (Burge 2013: 187-188, emphasis added)

The reliability is accidental, deviant. That’s why one “does not become warranted because a bolt of lightning or some puppeteer sets up a reliable connection to a subject matter” (Burge 2003: 507). So reliable, the state would not be a route to truth *through its nature*; the state would fail to connect the first condition on perceptual, empirical warrant with the second. Simple Reliablism is wrong for it ignores the second condition on warrant.

To put it another way, an exercise of a belief-forming *process* contributes to warrant only if it is an exercise of a belief-forming *competence*. A belief-forming competence is reliable in normal conditions when functioning normally. If nothing explains why the process is reliable in normal conditions when functioning normally, then the process is not a competence. If not a competence, then even if it reliably produces true beliefs, it doesn’t produce warrant. Not any kind of reliability will do.

Before returning to our question about demon worlds, we can now explain what Burge means by the slogan “warrant is a good route to truth.” By the first condition, warrant is a *reliable route* to truth; by the second condition, warrant is a *good* route, a route that non-accidentally and explanatorily connects the warranted belief with reliable truth and thereby conduces towards knowledge. *Good* routes to truth are routes that contribute to truth in normal conditions when functioning normally. Good routes are explanatorily connected to the nature of the state. Good routes are competent routes, routes that manifest competence. Good *reliable* routes contribute to truth, reliably so.

**3 Burge’s Explanation for the Persistence of Warrant in Demon Worlds**

I now turn to Burge’s answer to our main question: why should warrant persist in demon worlds? If warrant is a good route to truth and knowledge for the individual, then how could perception contribute to warrant in demon worlds?

*3.1 Burge’s Text*

Here is Burge’s answer from section VI of “Perceptual Entitlement” (Burge 2003: 534-536). I have numbered the sentences in brackets for reference.

[1] It is a *fundamental feature* of perceptual warrant, hence perceptual entitlement, that it allows that an individual can be fooled while retaining warrant. [2] Warrant is retained if the error is accidental, relative to the nature of the perspective. [3] Perceptual errors or *unreliabilities* that are perceptually indiscernible and derive from brute abnormalities in the environmental conditions that cause perceptual states do not undermine warrant. [4] Both *unreliability* and reliability in conditions other than those that played a role in explaining the nature of the perceptual state and the exercise of the perceptual competence are accidental relative to those natures. [5] So reliability and *unreliability* in such conditions are *irrelevant* to the connection between warrant and veridicality. [6] The only reliability that is relevant to the contribution of perceptual states to perceptual warrant is one that attaches to the states’ normal functioning in the conditions that explain their natures. That is the only reliability that is non-accidental relative to the natures of the perceptual states. [7] Thus the normal environment—the conditions in which content is explained and established—is privileged in explanation of entitlement. [8] Its privilege derives from the fact that it plays a central role in making the individual’s states what they are—a role that abnormal environments do not play. [9] This privilege entails the irrelevance to entitlement of reliability and unreliability in other conditions. [10] *So it extends to indiscernible abnormal environments* that the individual might contingently find himself in. (Burge 2003: 536, emphases added)

If you are like me, you found this reasoning difficult. I shall provide a reconstruction that, if successful, would explain why a perceptual state or competence that is reliable in normal conditions would continue to contribute to warrant even in demon worlds. I shall not rely heavily on the latter half of Burge’s paragraph, for that repeats points I just made in the previous section that flow from his conclusion that states must be reliable through their natures to contribute to warrant. Instead I’ll rely on the first half where I think the main ideas reside. You’ll be the judge.

*3.2 Burge’s argument reconstructed*

Here is my reconstruction:

1. It is a platitude that warrant is compatible with error, that not all warranted beliefs are true. [1]
2. Warrant is compatible with *accidental* error, in particular. [2] from [1].
3. Accidental error is (or includes) error due to abnormalities in environmental conditions (such as a burst of radiation before the eye, or strange lighting conditions, or the presence of distorting mirrors, etc.). [3]
4. So, warrant is compatible with error due to *environmental abnormalities*. [2], [3]
5. *Systematic accidental* error (massive error, and so accidental unreliabilities of a perceptual state type) is unreliability due to systematic abnormalities in environmental conditions, such as imagined in demon world scenarios. [3], [4]
6. There is no principled distinction between occasional accidental error (a few mistakes due to abnormalities) and extensive, even systematic, accidental unreliability (mostly mistakes due to abnormalities) that matters to the compatibility of warrant and error (there is no principled difference between *some* error and *massive* error in this context; both are compatible with warrant).
7. Warrant is then compatible with massive, systematic accidental error (accidental unreliability), due to systematic abnormalities in environmental conditions, such as demon worlds. [9]
8. So as long as a perceptual state or competence is reliable in normal conditions (reliable through its nature), its warrant conferring power thus “extends to indiscernible abnormal environments that the individual might contingently find himself in.” [6-9]

This appears to be a valid argument from plausible premises. If successful, it explains why warrant should persist in demon worlds.

**4 Three Criticisms: Doubting Burge’s Explanation**

Though I agree with Burge’s conclusion, I am not satisfied with this explanation. I shall make three criticisms. The first two criticisms rely on a distinction between two versions of “Burgean” normal circumstances reliabilism: *bounded* normal circumstances reliabilism versus *unbounded* normal circumstances reliabilism.

*4.1 Unbounded vs. Bounded Normal Circumstances Reliabilism*

Taking Burge’s two conditions on perceptual warrant at face value (as well as the rest of his derivation of normal circumstances reliabilism), we still leave open the possibility (if not the plausibility) of a view very close to Burge’s that nevertheless diverges on the issue at hand. Here’s what I mean: granting Burge’s two conditions on perceptual warrant, an epistemologist might advance (what I’ll call) “bounded” normal circumstances reliabilism, where Burge advances (what I’ll call) “unbounded” normal circumstances reliabilism. Here are the two rivals:

**Unbounded, Normal Circumstances Reliabilism**. In all possible worlds W, perceptual beliefs are prima belief defeasibly warranted when, and only when, the perceptual system is reliable in normal conditions when functioning normally. However, warrant does not require de facto reliability in the circumstances of use, only in normal conditions. The subject need not reside in normal conditions, and so the process need not be in situ reliable; the subject’s perceptual states need not be occasioned through wide normal pathways. A massively deceived brain-in-a-vat may then enjoy prima facie warranted beliefs, provided the massively deceived brain-in-a vat’s perceptual states are reliably veridical in normal conditions. Warrant is *not* bounded by normal circumstances.

**Bounded, Normal Circumstances Reliabilism**. In all possible worlds W, perceptual beliefs are prima belief defeasibly warranted when, and only when, the perceptual system is reliable in normal conditions when functioning normally. Warrant requires that the individual subject reside in normal conditions, for warrant requires that the perceptual state not only be occasioned through normal narrow pathways (and so the perceptual system is functioning normally) but also through normal wide pathways (so that the subject is in normal conditions), for warrant is a good route to truth and knowledge through the nature of the warranting state. A massively deceived brain-in-a-vat does not enjoy prima facie warranted beliefs, even if the deceived individual’s perceptual states are reliable in normal conditions, for while envatted perceptual states are not reliable routes to truth. Not in normal conditions, the beliefs are not on a narrow *and wide* route to truth. Warrant is *bounded* by normal circumstances.

Both Bounded and Unbounded Reliabilism think that accidental reliability won’t do for warrant; mere de facto, in situ reliability is not enough. They agree that warrant is a good and reliable route to truth; the Bounded Reliabilist accepts Burge’s explanation for why this is so. But Bounded Reliabilism requires that the perceptual state not only be reliable *when* occasioned through its formative pathways, it also requires that it be *in* normal conditions so that it is also *in situ* reliable, so that as a matter of fact the perceptual state makes the perceptual belief more likely to be true. For the Bounded Reliabilist, perceptual warrant in situ non-accidentally raises the conditional probability of truth; no raising, no warrant. For the Bounded Reliabilist, the first condition is just as paramount as the second. Perceptual competencies and states do not, on this view, contribute to prima facie warrant for perceptual beliefs in demon worlds; no contribution to a tendency to form true beliefs in the present environment, no contribution to warrant. In a demon world, though many have the strong intuition that warrant persists, the Bounded Reliabilist doubts the persistence of warrant. Indeed, taking Burge’s two conditions *at face value*, the most reasonable conclusion is that warrant does *not* persist in demon worlds.

I raise the possibility of Bounded Reliabilism not because I believe it is true—on the contrary I side with Burge—but rather because I want to understand why it is false, and understanding why it is false just is to understand *why warrant should persist in demon worlds*. And so to evaluate Burge’s explanation for why warrant should persist in demon worlds, we should find that Burge’s explanation provides good grounds for rejecting Bounded Reliabilism. And so I will ask whether it does.

*4.2 Accidental vs. Normal Error*

To evaluate Burge’s explanation, let’s see where the Bounded Reliabilist might pushback.

I think there are two places to pushback: the argument from (1)-(3) for (4), and step (6); the Bounded Reliablist can deny either (4) or (6) or both. (If you have forgotten my reconstruction of Burge’s argument already, you may want to quickly review it again before continuing.)

Burge presents (2) as a natural extension, application, or even as a gloss, on (1). I accept (1) as a platitude, as a “fundamental feature” of warrant. But the conclusion (4) from (2) and (3) is not a simple extension of (1). Here’s why. There are at least two kinds of perceptual error. One kind is the kind Burge emphasizes: accidental error, error due to abnormalities in environmental conditions. Abnormal conditions would be conditions dissimilar to the kinds of conditions that were present during the formation of the perceptual state type in the perceptual system; they will be errors occasioned through *non-formative* pathways. Paradigm cases of error in abnormal conditions involve strange highly unlikely bursts of radiation just before the eye, triggering a perceptual illusion, or cases of irregular colors of light, or distorting mirrors, or new undetectable particles in the air that distort the refraction of light, and so on. These are errors when the state is *not* on a good route to truth.

But error due to circumstantial abnormality is not the only cause or category of perceptual error. There are also perceptual errors that arise through the normal functioning of the belief forming process in normal conditions. For there are cases where the perceptual system, though *reliable* in normal conditions when functioning normally, is not *infallible* in normal conditions when functioning normally, so there are bound to be cases whether the perceptual system misrepresents the environment while in normal conditions when functioning normally; being occasioned through normal wide formative pathways is not a guarantee of veridicality. These are errors when the state is on a good route to truth.

If you find yourself puzzled about this, note first that Burge believes that not all perceptual states and competences are even *reliable* in normal conditions when functioning normally. He imagines that a rabbit’s perceptual system represents the presence of danger. The rabbit’s perceptual attributive danger is clearly not *infallible* in normal conditions when normally formed, for it is not even *reliable* in normal conditions when normally formed. And if there are perceptual state types that are not even reliable when normally formed in normal conditions, then there are sure to be many perceptual state types in a perceptual system that, though they are reliable in normal conditions when functioning normally, are not infallible in normal conditions when functioning normally. Hence there will be perceptual errors that occur when the system is functioning normally in normal conditions. Good and reliable routes are not necessarily reliable, let alone infallible.

Indeed, think of nearly any device you’ve ever worked with. Some may indeed be infallible (they always work) in normal conditions when functioning normally. But many are made to be just good enough, so that even when they are functioning normally in normal conditions, they don’t always work. Most can openers I have owned are like that.

Textbook cases of perceptual illusions can also be interpreted as errors due to normal functioning in normal conditions. True, some illusions are generated when there is something unusual or abnormal about the circumstances (such as colored lighting or the presence of distorting mirrors), but not all textbook cases of perceptual illusions work like that. Cases like the Muller-Lyer illusion arise when the perceptual system is in normal conditions (the conditions in which the perceptual system was formed) and is functioning normally. The illusion arises because the perceptual system was formed through tradeoffs for accuracy and efficiency. The efficient system results in a highly reliable perceptual system in normal conditions when functioning normally for the most part. But given the built-in biases and formation principles within the perceptual system, there are bound to be errors that occur even when the perceptual system is functioning normally in normal conditions.

So the Bounded Reliabilist is free to distinguish two cases: error that occurs when the perceptual system is functioning normally in normal conditions (errors on a good route), and error that occurs when the perceptual system is functioning normally but in abnormal conditions (errors off the good route). The Bounded Reliabilist is free to argue that perceptual warrant persists *only when all is normal*, and so free to agree that warrant is compatible with perceptual error *when all is normal*, but to deny that warrant persists when conditions are *abnormal*; just as “narrow” abnormality (malfunctioning, disease, overload) undermines warrant, “wide” abnormality (bursts of light, distorting mirrors) undermines warrant: warrant arises through the normal functioning of the belief-forming process while situated *in* and *through* normal conditions. Warrant does not entail truth, but for all that warrant entails a higher chance of truth.

The Bounded Reliabilist can thus assert the fundamental feature of warrant in (1) but deny (2) (in the light of (3)) and so free to deny (4) and thereby stop Burge’s explanation just as it starts to get off the ground. Warrant is *not* compatible with *some* accidental error, so it is not compabitle with *massive* accidental error. That’s the first way the Bounded Reliabilist can accept Burge’s overall point of view—Burge’s two conditions on perceptual warrant—but deny that warrant persists in demon worlds.

*4.3 Some Error vs. Massive Error*

I now turn to the second way the Bounded Reliabilist can pushback. This second way abstracts away from the point just made, viz. the difference due to errors through normal wide pathways and errors through abnormal wide pathways. In other words, it is compatible with accepting Burge’s argument for (4).

The second way to pushback questions (6), for doing so is in the very spirit of the Bounded Reliabilist position. Recall premise (6):

1. There is no principled distinction between occasional accidental error (a few mistakes due to abnormalities) and extensive, even systematic, accidental unreliability (mostly mistakes due to abnormalities) that matters to the compatibility of warrant and error (there is no principled difference between some error and massive error).

Now the Bounded Reliabilist may agree that she doesn’t know exactly how to draw a principled distinction here, but like the difference between being bald and having a full head of hair, the Bounded Reliabilist feels confident that there *is* a difference between *occasional* accidental error (so that not every warranted perceptual belief is true, even when accidentally caused) and *massive* accidental error (so that nearly every warranted perceptual belief is false, even when in abnormal and so accidental conditions). Surely there is a difference, the Bounded Reliabilist asks, between *occasional* error (due to either abnormalities or normalities in the environment) and *massive* unreliability? Error *once in a while* is still compatible with being right *most of the time*, and so compatible with warrant, for warrant is *a reliable route to truth*. But error nearly *all* the time? How could that, the Bounded Reliabilist believe, be compatible with *warrant*? Where is the epistemic good in that? How could that certify a belief as true and knowledge?

The point I’ve just made suggests we can’t simply infer that warrant may persist in demon worlds from the premise that warrant is fallible. True, warrant does not guarantee truth (some warranted beliefs are false), but that does not *ipso facto* show that most warranted beliefs may be false (massive error is compatible with warrant). It *may* show that, but further considerations are surely required to seal the deal.

Not knowing how to answer these two ways the Bounded Reliabilist might push back, I find myself dissatisfied with Burge’s explanation for the persistence of warrant in demon worlds. Burge’s explanation does not explain to me why warrant should persist in demon worlds.

*4.4 Removing a Requirement vs. Explaining Persistence*

I think I can go a step further and say more about why I am dissatisfied. What leaves me feeling short on understanding why warrant should persist on Burge’s explanation is its “negative” character. By that I mean that Burge’s explanation works (if it does) by arguing (in effect) that since warrant does not entail truth, it doesn’t entail (require) reliability either (at least reliability in abnormal conditions when the individual is in abnormal conditions). That is, it works by saying there *isn’t* a condition on warrant that would require warrant in demon worlds. In other words, it *removes* an *obstacle* to the persistence of warrant in demon worlds. It doesn’t *explain* what it is about warrant that *persists*, or that is *clearly present*, in demon worlds. It doesn’t *identify* the “positive” epistemic property that perceptual beliefs clearly possess in demon worlds, the kind of property the Bounded Reliabilist needs to see to be moved to abandon her position, for it was exactly her inability to see such a positive epistemic property that led her to believe that warrant does not persist in demon worlds. All we are told is that the perceptual state type, because it is reliable through its nature (through narrow and wide pathways), would be a reliable guide to truth were the state “over there” in normal conditions, instead of “here” in abnormal, massively deceptive conditions. But how does that explain why warrant should persist? If warrant is a good *and* reliable route to truth, and so a *reliable* route to truth, then how could it persist in demon worlds, where it is not a route to truth at all, where it will never take you to your destination? “[I]t is the individual at a given time for which warrant is supposed to provide a good route to truth” (Burge 2003: 533). It can’t do that in demon worlds. So why should warrant persist in demon worlds? Why should *reliability* in *normal* environments mean *warrant* in *abnormal* environments? After all this work, we seem to be back where we started. We still don’t know why being reliable in normal conditions should have a force that carries “over to other environments that the individual might form perceptual beliefs within” (Burge 2003: 533).

And so I am not satisfied with Burge’s direct answer to our question. More still needs to be said.

**5 Two Grades of Warrant: Normal Functioning Persists in Demon Worlds**

To see whether we can answer our central question within Burge’s framework, we need to rethink the weight that’s been placed on the phrase “route to truth” and the role that reliability plays in our overall account of warrant, especially perceptual warrant. This should come as no surprise, for the very idea that warrant requires reliability—that warrant is a *reliable* *route* to truth—is the source of the conflict with the idea that warrant might persist in demon worlds. So if warrant requires reliability, we need to reassess what we mean when we say that.

Here’s an imaginary conversation between *B*urge (or someone speaking in defense of Burge) and an interested *I*nterlocutor mutually engaging in this very rethinking:

B: Warrant is an epistemic good.

I: Why?

B: Because truth and knowledge are epistemic goods. Warrant contributes, in an epistemically good way, to truth and knowledge; warrant is a good route to truth and knowledge.

I: But what about accidental reliability? Why isn’t it a contributor to truth and knowledge?

B: Though a contributor to truth, an accidentally reliable state does not contribute to truth *through its nature*. The state’s accidental reliability does not explain why the state, on its own, should make an explanatory, non-accidental contribution to warrant; accidental reliability isn’t a *good* route to truth. Non-accidental routes exercise and sometimes manifest competence. Nothing counts as exercising or manifesting competence for routes that are but accidentally reliable. “Clairvoyance” cases are ruled out.

I: But what about a demon world situation? Why should that individual have warranted perceptual beliefs, for perception there is not a route to truth, let alone a reliable route? Perception there does not contribute to truth and knowledge.

B: Let’s rethink a little. Maybe we’re placing too much weight on the phrase “route to truth.” We should think instead of warrant, as such, as a *part* of a good route to truth and knowledge, as a *constituent* or *contributor* to knowledge, and not as a *route* to truth and knowledge *all on its own* (modulo Gettier failures, internal incoherence, and counter warrants). To be a good and reliable *route to truth and knowledge*, maybe the warranting state and exercise of the competence must be *in normal conditions*, but the warranting state and exercise of the competence is still *a part of* a good route to truth even when it is not in normal conditions. Warrant is then *part* of a good route to truth. Construct the road to the destination and then factor out a part. Call that warrant.

I: What do you mean? Why is the exercise of a perceptual competence in forming a perceptual state *part of* a good and reliable route to truth, even when the individual is not in normal conditions? How could it be a *part* of a route to truth?

B: Well, a perceptual state type that is reliable in normal conditions is a perceptual state that is reliably veridical in normal conditions when the perceptual system is functioning normally. That’s why perceptual beliefs appropriately derived from the normally formed state and are reliably true in normal conditions, non-accidentally so. The way a perceptual competence contributes to truth and knowledge is by being reliable in normal conditions when the perceptual system is functioning normally. The perceptual state type is a good route to truth through its nature (a) when normally formed, (b) reliable-in-normal-conditions, and (c) *in* normal conditions, and so in situ reliable through “narrow” and “wide” normal pathways.

I: I understand all that. But what has this got to do with warrant while in a brain-in-a vat or demon scenario, when the individual is not in normal conditions?

B: Once we have a good, explanatory pathway from competence to truth, we can factor the way a perceptual competence *contributes* to truth and knowledge into two elements. One: formation of the perceptual state and perceptual belief along “narrow” formative pathways, viz. normal functioning of the perceptual system and the transition to perceptual belief. Two: formation of the perceptual belief along “wide” formative pathways, viz. the normal functioning of the perceptual system in normal conditions. A good route runs on both parts.

I: Yes, I remember you said all of that when you were explaining what it was for a perceptual state within a perceptual system to be a reliable guide to truth through its nature.

B: When both parts obtain, a perceptual state is a good route to truth and conduces to knowledge. So *each* *part* contributes to a good route to truth and knowledge; each part *on its own* is a *contribution* to a good route to truth and knowledge. Since we can factor these two contributions—normal functioning (formation along *narrow* formative pathways) and being in normal conditions (formation along *wide* pathways)—we can see that the first dimension—normal functioning—is *one part* (one factor) of the overall good route to truth. *So normal functioning* (in the formation of the perceptual state and the transition to perceptual belief) *is part of* *a good route to truth and k*nowledge. (Warrant *contributes* to fulfilling representational functions; you can *contribute* to a goal without necessarily, or even reliably, achieving that goal). Like I said, build the road to your destination and then factor out a part. That part, like the other, contributes to a route to truth and knowledge.

I: OK, so normal functioning when the state is reliable in normal conditions is *a part of* a good route to truth and knowledge: it is not a good route to truth *all on its own*. But why does that explain why warrant persists in demon world scenarios?

B: That’s easy. In the vat fooled by a scientist, or fooled by a demon, or even in undetectably non-normal circumstances, the formation of the perceptual state by the perceptual system and the transition to perceptual belief may still function normally. You don’t have to be in normal conditions for your perceptual system to function normally. For example, normal conditions for a car involve the car sitting comfortably on the road so it can take you from A to B. But you can take your car into the mechanic’s shop and raise it up off the ground for inspection. The mechanic may find that the major systems in the car work just fine—they are functioning normally—even if the car isn’t on the road and so isn’t in normal circumstances. The brain-in-a-vat scenario is a pretty clear parallel. Your brain and visual system can function normally in such circumstances, even if you end up forming entirely false visual beliefs as a result. The normally functioning perceptual system won’t know the difference.

I: Normal functioning can persist in demon world scenarios. I see that. I remember Peter Graham using the car analogy in his paper “Epistemic Entitlement.” But I still don’t get it. Since reliability lapses, why does warrant persist? Shouldn’t it lapse?

B: Warrant persists because normal functioning persists, *provided warrant consists in the normal functioning of the perceptual belief-forming process*, *provided the process is reliable in normal conditions when functioning normally*, which is what I am now claiming. That’s why warrant persists in demon world scenarios. Warrant isn’t *as such* a good route to truth and knowledge; warrant *as such* contributes to truth and knowledge by being a *part* of a good route to truth and knowledge; warrant is part of a good route to truth and knowledge.

I: Hmm, so warrant consists in the normal functioning of a perceptual competence? But if warrant consists in normal functioning, then why do you need to add the qualification “provided the state is reliable in normal conditions”? Why should that matter to warrant? Why shouldn’t a normally formed perceptual state that *isn’t* reliable in normal conditions *also* warrant an appropriately derived perceptual belief in a demon scenario? After all, in both cases, the perceptual system is *functioning normally*. Why not go internalist, as it were?

B: Good question. Though now I’ve claimed perceptual warrant *as such* isn’t *on its own* a good route to truth, but only *part of* a good route to truth, you’re right to ask why normal functioning alone isn’t enough for warrant. I think the answer is easy. If a perceptual state or system isn’t reliable in normal conditions, then the normally functioning system isn’t *part* of a *reliable* route to truth, *even in normal conditions*. Hence if a perceptual state or system isn’t *reliable in normal conditions*, normal functioning isn’t itself *a part of* a good and reliable route to truth and knowledge; it is not a *part* of a reliable route to truth *through its nature*. For warrant to consist in the normal formation of the state and the transition to perceptual belief—normal functioning—then the state must be reliable in normal conditions, for then it is *part of a reliable route to truth and knowledge* *through its nature*.

I: I get it now. You’ve in a way retreated to a weaker conception of warrant, where it necessarily connects to truth *in normal conditions*, but not necessarily outside of normal conditions. If normal functioning in normal conditions didn’t reliably result in true beliefs, then normal functioning wouldn’t warrant *in any conditions*, for it wouldn’t be part of a good and reliable route to truth. Warrant consists in normal functioning provided the process is reliable in normal conditions, even if the process isn’t in normal conditions.[[10]](#endnote-10)

In order to reconcile the apparent conflict between your first condition on warrant and the persistence of warrant in demon worlds, you’ve made use of what’s required to satisfy the second condition (perceptual states contribute to warrant through their natures, and so contribute to truth and knowledge when normally formed in normal conditions) to reassess what counts as satisfying the first condition (warrant is a now a *part* of a good route to truth and knowledge). Pretty clever.

Can I make a suggestion? Instead of “re-thinking” warrant so that warrant consists in normal functioning, provided the competence is reliable in normal conditions (even if the competence is not in normal conditions), why not divide warrant into two grades? The first grade would consist in normal functioning, as you are now framing warrant, and the second would consist in normal functioning *plus* being situated in normal conditions, so that the process, as a matter of fact, is indeed reliable in the circumstances, so that warrant is, as a matter of fact, clearly contributing to truth and knowledge? The first grade constitutively depends on the second grade (the first grade would not be a grade of warrant unless it conduced towards truth in normal conditions), but the first grade can persist beyond normal conditions. The first grade would be “unbounded,” the second grade would be “bounded.” The first grade would *contribute* to warrant’s function of conducing truth and knowledge, while the second would, absent Gettier failures, internal incoherence, and so on, really would conduce truth and knowledge. How does that sound?

B: I like the way it sounds. Maybe that’s what I was thinking all along, an implicit conception that may have been guiding my thinking. Hmm, maybe we even need a further grade, to capture Planting’s use of ‘warrant.’ Someone should write a paper called “Two (Maybe Three) Grades of Warrant.”

I: Hmm, not a bad idea. And now that we’ve had this discussion, my memory of Peter Graham’s paper “Epistemic Entitlement” is coming back to me. He offers a proper functionalist view that also purports to explain why warrant persists in demon worlds. I think he’s even said there are two grades, or two kinds, of warrant or entitlement, in at least one or two of his papers. But unlike you, I don’t think he relies on the thesis that it is a priori that perceptions and beliefs have representational functions (an idea we haven’t had a chance to talk about yet). Instead he tries to derive their functions from their history. I think he also then claims directly that the competence has the function of reliably inducing true beliefs, without arguing that the states or beliefs themselves have functions. He then, if memory serves, argues that normal functioning by its nature is constitutively associated with reliably inducing true beliefs, when the system has forming true beliefs reliably as a function. What do you think about these differences? Where do you think Graham goes wrong, if he does?

B: Well, I'm glad you’ve asked. I think he makes a number of grave mistakes. Just let me get a glass of water to clear my throat, and then I’ll be happy to discuss those at length.

I: My goodness, is that the time? I’m afraid I have to go. Thank you so much for bearing with me for so long. I’m sure we’ll have a chance to continue our conversation on another occasion.[[11]](#endnote-11)

**Appendix. Misunderstanding Perceptual Anti-Individualism**

Some wrongly read Burge’s perceptual anti-individualism as the thesis that perceptual states are *necessarily* reliable (reliable in all possible circumstances). This is not correct. Perceptual states can be massively in error outside of normal conditions. That’s the brain-in-a-vat scenario, provided the perceptual system previously interacted with entities in a broader environment so as to underwrite perceptual representational content in the first place: “In principle, any perceiver could be placed in a situation in which any given perceptual state-type could be regularly mistaken—if the perceiver already has perceptual states with definite content. In other words, every perceptual state type would be unreliable in a variety of possible abnormal environments that are perceptually indiscernible, at the time of a given perception, from the normal environment” (Burge 2003: 535; 2005). “There is no metaphysical necessity that [a] perceiver be in an environment that makes perception reliable” (Burge 1998/2013: 357; cf. Burge 1986b).

One source of misunderstanding derives from misunderstanding the externalist slogan “contents are causes.” According to a crude reading of the slogan, the content of a token perceptual representation just is the token distal cause of the representation; as such perceptual representations are at least referentially infallible if not also attributively infallible. This is far from Burge’s understanding of the slogan. According to Burge, the attributive content (the red or moving part of the content) of perceptual representations derives from patterns of causal interaction between the perceptual system and the wider environment; representational types are partly fixed by types of causes. Burge does not hold that perceptual representations are either referentially infallible nor attributively infallible. Far from it. (See Burge 2005 for elaboration.)

Does Burgean perceptual anti-individualism entail that perceptual states are necessarily reliable *in normal conditions*? Burge once argued for an affirmative answer:

I believe that a perceptual system in any agent…is constitutively associated with reliable perceptions in a range of cases. (1996: n. 11) I think that being *reliable* in normal circumstances can be shown to be *necessary* to a capacity…to register perceptual appearances… (1997/2013: 294, emphasis added) There is no metaphysical necessity that the perceiver be in an environment that makes perception reliable (though one’s perceptual system *must have been formed* in such an environment). (1998/2013: 357, emphasis added) Being a perceiver *necessarily* involves certain *reliabilities* in perceiving normal perceptual objects in normal circumstances. (1998/2013: 347, emphasis added).

But he abandoned this in “Perceptual Entitlement”:

An individual can have perceptual beliefs, but no warranted ones. *The nature of perceptual states does not require that they be reliably veridical in their normal content-determining environment*. … I have been misunderstood to hold…that it is apriori and constitutively true that perceptual systems are reliable in normal circumstances—the circumstances in which their contents were formed. *I do not hold this view*, and consciously wrote around it in [“Perceptual Entitlement”]. (2013: 202, n. 89, emphasis added; cf. 2013: 262, n. 14)

Burgean perceptual anti-individualism does not entail that perceptual states are necessarily reliable in normal conditions. Perceptual anti-individualism requires explanatory connections with a wider environment for perceptual content. Whether those patterns of interaction underwrite reliable *or* unreliable perceptual state types depends on how the perceptual system in the organism uses those perceptual states and other contingent features of the organism’s normal environment.

For example, as I have noted in the paper, perceptual representations of danger in some animals like the rabbit are not reliable in the organism’s normal environment. Burge noted this possibility in 1996:

A tempting oversimplification is to claim that…constitutive veridical causal relations are always *reliably* veridical. Such a claim is tempting because in so many cases or perceptions are reliable…[T]he claim is oversimplified because some perceptual intentional types in some systems are established through the systems’ relable avoidance of false negative rather than through their reliable achievement of true positives. It is more critical to a hare’s perceptual system that it not fail to register a predator when one is there than it be reliable in its registrations of predators. (Burge 1996: n.11)

He later concluded that the point generalizes:

An individual can be perceptually wrong more often than right even in its normal environment. The value of veridicality may pay for many errors. One veridical representation of a predator may pay for a lifetime of false positives. (Burge 2005: 5)

Representation can in principle be quite unreliable, even in normal circumstances. An animal’s representation of danger might be reliably inaccurate but still serve the animal’s biological needs. (Burge 2010: 299-300)

For the most part rabbits accurately represent danger when danger is present, but more often than not inaccurately represent danger as present when it is not. Danger is not a reliable perceptual state type within the rabbit’s normal environment. Various creatures in the animal kingdom might have a score of perceptual attributives that are not reliably applied to entities in their normal environment when the systems are functioning normally. Lobsters, covered with armor with no natural predators, may have little use for reliable perceptual competences. A perceiver may possess no reliable perceptual attributives, but still a perceiver for all that.

I conjecture that Burge would also accept the following: even if a perceptual state type in an organism is reliable in normal conditions, it would still be the same perceptual state *type* even if, counterfactually, it was formed and explained in an environment where the perceptual state type is not reliable. Take a perceptual attributive F in a perceptual system that represents the attribute F-ness. Suppose the representational state was formed through input-output patterns of interaction FP-1 with entities distributed across the wider environment. As a contingent matter, the attributive F in this system was formed in this manner. The state, so formed, may be reliable in that environment. But the very same perceptual attributive type in another system, or even the very same system in a counterfactual setting, might have been formed through different input-output patterns of interaction FP-2 with the environment, possibly a very different environment, where the state type is not reliable. Though explanatorily associated with the nature of perceptual states, *particular* formative patterns and particular formative environments are not *necessarily* associated with perceptual state types. Perceptual state types, when they are reliable in normal conditions, are only contingently so reliable. Consider again the rabbit. There may be rabbits whose danger representations are reliable in their normal environments, just as there are rabbits with danger representations that are not reliable in their normal environments.

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1. I use ‘warrant’ in line with Burge’s use, where warrant constitutively contributes to, and conduces, knowledge. Warrant generically is not, as Plantinga would have, that which converts true belief into knowledge. On Plantinga’s use, there is no such thing as a warranted true belief that does not amount to knowledge, or any such a thing as a warranted false belief for that matter. I shall not be using the word this way. As an English word, ‘warrant’ goes back at least to the 14th century, with a number of different uses. Plantinga didn’t invent the word; he stipulated a particular use for his own purposes. Burge uses ‘warrant’ largely synonymously with the field’s broad use of the term ‘justification’. Warrants are *epistemic* accomplishments, successes or achievements that underlie the individual’s *epistemic* right to form or hold a belief, epistemic bases or grounds that are constituents or enablers of *knowledge*. Burge then distinguishes two kinds of warrant: entitlement and justification. Justifications are associated with reasons. An epistemic reason is a propositional attitude that contributes to the explanation of the belief-worthiness of the conclusion belief. A self-evident proposition contains its own reason for belief; understanding the proposition involves understanding the reason for belief. Deductive and inductive arguments in the psychology of a believer paradigmatically include warranted premise beliefs that support the belief-worthiness of the conclusion belief. The premise beliefs are then reasons for the conclusion belief. Entitlements are warrants without reasons. Perceptual warrants are paradigmatically, if not exclusively, entitlements, for perceptual belief formation is not a case of reasoning, but instead a psychological transition from a perceptual state to a conceptualization of that state. Importantly for Burge, as we’ll see, the warrant for a perceptual belief is not the perceptual state considered in isolation, but involves the normal functioning of the perceptual system in the formation of the perceptual state and the normal functioning of the transition to perceptual belief in the conceptualization of the perceptual state. [↑](#endnote-ref-1)
2. I shall use the phrase ‘demon world’ broadly for not just those circumstances where a powerful demon is systematically fooling his victim, but also cases where massive undetectable error occurs because of a cunning scientist, undetectable abnormalities in the environment, or even a bizarre cosmic accident. I do not grant the metaphysical possibility of disembodied spirits or always “envatted” brains with no causal or explanatory relations to a wider environment. See Graham 2012 and Gerken, forthcoming. [↑](#endnote-ref-2)
3. Cohen & Lehrer 1983; Cohen 1984; Pollock 1984; Foley 1985; Wedgwood 2002; Cruz and Pollock 2004. [↑](#endnote-ref-3)
4. Goldman 1986, 2011; Sosa 2001. [↑](#endnote-ref-4)
5. I have discussed this strategy in Graham 2010, 2012, 2016 and 2017. I criticize Goldman in my 2012 and 2017. I criticize Sosa in my 2016. Other proposed solutions come from Henderson and Horgan and Lyons. I criticize Henderson and Horgan in Graham 2014d. I criticize Lyons in Graham 2011c, 2014a and 2017. [↑](#endnote-ref-5)
6. I regard “Perceptual Entitlement” as a landmark paper in the philosophy and epistemology of perception and perceptual belief. It addresses the nature of warrant, the nature of sensation, perception, perceptual agency, perceptual belief, and the epistemology of perception, while effectively criticizing seminal positions on these topics from Sellars and others. Dense, detailed, empirically well-informed and highly original, it presents one of the most sophisticated accounts of these topics to date. We all have a great deal to learn from this paper. I know I have. Despite my admiration for Burge’s paper, it has not been widely discussed, though it has been frequently cited. This may be due to its difficulty; as I said, it is dense and detailed, covering a wide scope of interrelated topics. [↑](#endnote-ref-6)
7. Other authors that emphasize the importance of reliability in normal conditions include Bergmann 2006, Graham 2012, Leplin 2009, and Majors & Sawyer 2005. [↑](#endnote-ref-7)
8. For discussion of these points, see the Appendix. [↑](#endnote-ref-8)
9. Reliability in normal conditions is not merely being *in* normal conditions *and* being reliable. Reliability in normal conditions entails being reliable *through* normal (wide and narrow) pathways in the normal environment. An individual organism might be in normal conditions and its perceptual states might be reliably veridical, but if the reliability results from artificial stimulation of the perceptual system or disease or even cosmic accident, then the reliability is not *reliability in normal circumstances*—it is not reliably *explained through* the normal narrow and wide pathways, reliability through the normal functioning of the competence in normal conditions. [↑](#endnote-ref-9)
10. One might object to this interpretation of Burge, as holding that warrant consists in the normal functioning of the transition from a reliably veridical perceptual state to perceptual belief, and the normal formation of the perceptual state by the perceptual system, for in “Perceptual Entitlement” Burge seems to say that normal functioning in the formation of the state by the system is not required for warrant in footnote 24 (pp. 537-8): “There is a subtle question here about malfunction. The question is whether the entitlement lapses if the system malfunctions in the particular circumstances, but the perceptual system and the particular perceptual state in the individual remain generally reliable. Suppose that, on one occasion, in the normal environment, a ray of the sun, included in the stimulation of the retina, causes a momentary neural malfunction that produces a perceptual state inappropriate to the environmental circumstances, and that the individual could not discern this case from a normal case of having the perceptual state-type….Would the individual’s epistemic entitlement lapse?...On the one hand, the particular path that normally leads to the perceptual state has been circumvented. This suggests that the entitlement might be undermined. For the functioning that supports reliable belief is not present. On the other hand, the perceptual state-type is what the entitlement derives from. It is produced by a reliable perceptual system; it is itself reliable in normal conditions, and has a nature that normally connects it to appropriate perceptual objects. This suggest that the entitlement remains intact, in something like the way it does in the case of brute error. An unlucky token event blocks knowledge but not warrant” (Burge 2003: 537-8). Burge then distances himself in an earlier footnote from “proper functioning” views like Plantinga’s on this basis: “There are cases in which a state is warranted in my sense, but is not even an instance of proper functioning (relative to the function of producing true beliefs) in his” (Burge 2003: 509, n. 6). So it seems that there’s pretty strong textual evidence that this can’t be Burge’s view. Even so, I’m pretty sure this is Burge’s view. Firstly, it makes sense of all the texts, especially the post “Perceptual Entitlement” writings. Secondly, Burge appears unsure about the issue, even in the footnote. Thirdly and most importantly, Burge tells me in personal correspondence that he realized later that the footnote was largely a mistake. Burge really does hold a normal or “proper” functioning account of warrant, provided the normally formed perceptual state type is reliable in normal conditions. [↑](#endnote-ref-10)
11. I have presented earlier versions to audiences at the University of California, Irvine; University of Copenhagen, Denmark; University of Geneva, Switzerland; Oxford University; University of Edinburgh; National Chung Cheng University, Taiwan; National Ching Huang University, Taiwan; the University of California, San Diego; and Notre Dame University. I benefitted from the discussions on all of these occasions. I recall helpful comments from Robert Audi, Sven Bernecker, Tyler Burge, David Brink, Nevin Climenhaga, Pascal Engel, Elizabeth Fricker, Alvin Goldman, Mikkel Gerken, Liz Jackson, Andrew Moon and Ralph Wedgwood, in particular. I am grateful to Zach Bachman for comments on the penultimate draft. [↑](#endnote-ref-11)